

WHAT IS CLAIMED IS:

1. A video distribution system connected to a communication network for distributing an image in response to a request, comprising:

at least one image pickup unit for picking up an image of a predetermined monitor area and converting said image into a video signal;

at least one encoder connected to receive the video signal from said image pickup unit, each encoder encoding the video signal from an associated image pickup unit and sending said encoded video signal to said network;

an image accumulation and distribution unit connected to said network for accumulating the encoded video signal from a designated encoder, said image accumulation and distribution unit attaching unique information to each image frame;

a data converter connected to said network for reading the accumulated image from said image accumulation and distribution unit and converting said image into a reduced image in response to a request;

at least one information terminal connected by wire or radio to said network for acquiring and displaying an image by accessing said image accumulation and distribution unit or said data converter; and

a notification unit connected to said network for reading the accumulated image from said image

accumulation and distribution unit, detecting an image change indicating an abnormality in said monitor area and displaying the alarm information containing the change occurrence time on an associated information terminal,

wherein said information terminal accesses said image accumulation and distribution unit or said data converter in response to an operation of said associated information terminal by the user and acquires the image in a predetermined time range related to said change occurrence time from said image accumulation and distribution unit or said data converter.

2. A video distribution system according to Claim 1,

wherein said information terminal displays in the display section thereof said alarm information including at least said image change occurrence time, the image as of said change occurrence time and a symbol allowing said information terminal user to select whether the image in said predetermined time range continues to be reproduced or not.

3. A video distribution system according to Claim 2,

wherein said information terminal displays in the display section thereof the image in said predetermined time range together with a symbol indicating the present reproduction condition in

response to said selection of the continued reproduction.

4. A video distribution system according to Claim 1,

wherein said information terminal acquires the image in said predetermined time range from said data converter and displays said image in dynamic image mode in the display section of said information terminal.

5. A video distribution system according to Claim 1,

wherein said information terminal acquires the image in said predetermined time range from said data converter and displays said image, frame by frame, in the display section of said information terminal in response to the request of said information terminal user.

6. A video distribution system according to Claim 1,

wherein said at least one information terminal includes at least one portable terminal and at least one client PC (personal computer).

7. A video distribution system according to Claim 2,

wherein said display section of said information terminal includes a field in which said user is caused to input at least the information for specifying said information terminal user and the

address of said notification unit in response to said selection of the continued reproduction.

8. A video distribution system according to Claim 7,

wherein said notification unit stores said unique information in a list in association with the serial number of a corresponding image frame each time of detection of said image change, and

wherein said list is displayed in said display section of said information terminal in such a way as to permit selection of arbitrary unique information, in response to the input of said user specifying information and the address of said notification unit.

9. A video distribution system connected to a communication network for distributing an image in response to a request, comprising:

at least one image pickup unit for picking up an image of a predetermined area and converting said image into a video signal;

at least one encoder connected to receive the video signal from said image pickup unit, each encoder encoding the video signal from associated image pickup unit and sending said encoded video signal to said network;

an image accumulation and distribution unit connected to said network for accumulating the encoded video signal from a designated encoder, said image

accumulation and distribution unit attaching unique information to each image frame;

a data converter connected to said network for reading the accumulated image from said image accumulation and distribution unit and converting said image into a reduced image in response to a request;

at least one information terminal connected by wire or radio to said network for acquiring and displaying an image by accessing said image accumulation and distribution unit or said data converter;

a sensor arranged in each said monitor area for detecting an abnormality in said monitor area; and

a notification unit connected to said network for reading the accumulated image from said image accumulation and distribution unit, receiving the output of said sensor indicating an abnormality in said monitor area and displaying the alarm information containing the change occurrence time on associated information terminal;

wherein said information terminal accesses said image accumulation and distribution unit or said converter in response to the user operation of said associated information terminal and acquires the image in a predetermined time range related to said change occurrence time from said image accumulation and distribution unit or said data converter.

10. A video distribution system according to

Claim 9,

wherein said information terminal displays in the display section thereof said alarm information including at least said image change occurrence time, the image as of said change occurrence time and a symbol allowing said user of said information terminal to select whether the image in said predetermined time range continues to be reproduced or not.

11. A video distribution system according to Claim 10,

wherein said information terminal displays in a display section thereof the image in said predetermined time range, together with a symbol indicating the present reproduction condition, in response to said selection of the continued reproduction.

12. A video distribution system according to Claim 9,

wherein said information terminal acquires the image in said predetermined time range from said data converter and displays said image in dynamic image mode in the display section of said information terminal.

13. A video distribution system according to Claim 9,

wherein said information terminal acquires the image in said predetermined time range from said data converter and displays said image, frame by frame,

in the display section of said information terminal in response to the request of said information terminal user.

14. A video distribution system according to Claim 9,

wherein said at least one information terminal includes at least one portable terminal and at least one client PC (personal computer).

15. A video distribution system according to Claim 10,

wherein said display section of said information terminal includes a field in which said user is caused to input at least the information for specifying said information terminal user and the address of said notification unit is displayed in response to said selection of the continued reproduction.

16. A video distribution system according to Claim 15,

wherein said notification unit stores said unique information and the serial number of a corresponding image frame in a list each time of detection of said image change, and

wherein said list is displayed in said display section of said information terminal in such a way to permit selection of an arbitrary detection time or an arbitrary channel number in response to the input of said user specifying information and the address of

said notification unit.

17. A video distribution method for a video distribution system connected to a communication network for distributing an image in response to a request, comprising the steps of:

    accumulating the video signal in at least one monitor area in an image accumulation and distribution unit through said network, wherein said video signal has attached thereto information unique to each image frame;

    reading an image for each said channel from said image accumulation and distribution unit through said network;

    detecting the image change indicating an abnormality in associated monitor area from said image read out, producing the alarm information containing the change occurrence time and a still image of said change occurrence time, and transmitting said alarm information to associated information terminal through said network;

    displaying said alarm information on said associated information terminal;

    acquiring the image in a predetermined time range related to said change occurrence time from said image accumulation and distribution unit or said data converter in response to the selection of the image reproduction by the user of said associated information terminal; and

displaying said image in said predetermined time range in the display unit of said associated information terminal.

18. A video distribution method for a video distribution system connected to a communication network for distributing an image in response to a request, comprising the steps of:

accumulating the video signal in at least one monitor area in an image accumulation and distribution unit through said network, wherein said video signal has attached thereto a channel number and a serial number constituting an ID number unique to the imaging date and time and the image pickup unit that has picked each frame of the image;

reading an image for each said channel from said image accumulation and distribution unit through said network;

detecting the image change indicating an abnormality in associated monitor area from said image read out, and producing the alarm information containing the change occurrence time and a still image as of said change occurrence time;

transmitting said alarm information to associated information terminal through said network and accumulating at least said change occurrence time and the channel number related to said change occurrence time as a number corresponding to said ID number as a first list in a notification unit;

displaying said alarm information on said associated information terminal;

starting a video replay application or program by the user of said associated information terminal and acquiring said first list from said notification unit;

generating a second list of the alarm generation time from said acquired first list and displaying said second list on said information terminal;

acquiring a reduced version of the image in a predetermined time range related to said selected change occurrence time from a data converter in response to the selection of the desired alarm generation time by said user; and

displaying said acquired reduced image in the display section of said information terminal.